

## DAFTAR ISI

<u>KATA PENGANTAR</u> .....	v
<u>DAFTAR ISI</u> .....	vii
<u>DAFTAR TABEL</u> .....	x
<u>DAFTAR GAMBAR</u> .....	xi
<u>BAB I</u> .....	1
<u>PENDAHULUAN</u> .....	1
<u>1.1 Latar Belakang</u> .....	1
<u>1.2 Rumusan Masalah</u> .....	2
<u>1.3 Manfaat dan Tujuan Penelitian</u> .....	2
<u>1.4 Batasan Masalah</u> .....	3
<u>1.5 Sistematika Penulisan</u> .....	3
<u>BAB II</u> .....	5
<u>LANDASAN TEORI</u> .....	5
<u>2.1 Pengertian Produktivitas</u> .....	5
<u>2.2 Overall Equipment Effectiveness (OEE)</u> .....	7
<u>2.2.1 Availability</u> .....	7
<u>2.2.2 Performance</u> .....	8
<u>2.2.3 Quality</u> .....	9
<u>2.3 Diagram Pareto</u> .....	9
<u>2.4 Fishbone Diagram</u> .....	11
<u>2.5 Diagram Matriks CTQ</u> .....	12
<u>2.6 Failure Mode and Effect Analysis (FMEA)</u> .....	14
<u>2.6.1 Proses FMEA</u> .....	21
<u>2.6.2 Risk Priority Numbers in FMEA</u> .....	22
<u>BAB III</u> .....	25
<u>METODOLOGI PENELITIAN</u> .....	25
<u>3.1 Rencana Penelitian</u> .....	25
<u>3.2 Objek Penelitian</u> .....	25
<u>3.3 Tempat dan Waktu Penelitian</u> .....	26

<u>3.4 Variabel Penelitian</u> .....	26
<u>3.5 Teknik Pengumpulan Data</u> .....	27
<u>3.6 Teknik Analisis Data</u> .....	27
<u>3.7 Flowchart</u> .....	29
<u>BAB IV</u> .....	30
<u>HASIL DAN PEMBAHASAN</u> .....	30
<u>4.1 Gambaran Umum Perusahaan</u> .....	30
<u>4.1.2 Struktur Organisasi</u> .....	30
<u>4.1.3 Produk yang dihasilkan</u> .....	31
<u>4.1.4 Saluran Distribusi</u> .....	32
<u>4.2 Proses Produksi</u> .....	33
<u>4.2.1 Proses Pembuatan Produk</u> .....	33
<u>4.3 Output yang dihasilkan dari proses produksi:</u> .....	39
<u>4.4 Peta Proses Operasi</u> .....	40
<u>4.5 Pengumpulan Data</u> .....	42
<u>4.5.1 Running Time</u> .....	42
<u>4.5.2 Data Downtime</u> .....	43
<u>4.5.3 Planned Downtime</u> .....	43
<u>4.5.4 Loading Time</u> .....	44
<u>4.5.5 Operation Time</u> .....	44
<u>4.5.6 Data Straightpass</u> .....	45
<u>4.6 Pengolahan Data</u> .....	45
<u>4.6.1 Availability</u> .....	45
<u>4.6.2 Performance Rate</u> .....	48
<u>4.6.3 Quality Rate</u> .....	49
<u>4.6.4 Overall Equipment Effectiveness</u> .....	50
<u>4.7 Analisa dan Pembahasan</u> .....	51
<u>4.7.1 Analisa Hasil Perhitungan Overall Equipment Effectiveness (OEE)</u> .....	51
<u>4.7.2 Analisa Six Big Losses</u> .....	52
<u>4.7.3 Pengaruh Losses</u> .....	59
<u>4.7.4 Analisa Diagram Pareto</u> .....	60
<u>4.7.5 Analisa Diagram Fishbone</u> .....	61

<u>4.7.6 Analisa Failure Mode Effect Analysis (FMEA).....</u>	64
<u>4.7.7 Usulan Perbaikan.....</u>	68
<u>BAB V .....</u>	69
<u>KESIMPULAN DAN SARAN.....</u>	69
<u>    5.1 Kesimpulan.....</u>	69
<u>    5.2 Saran.....</u>	70
<u>DAFTAR PUSTAKA .....</u>	71

## DAFTAR TABEL

Tabel 2.1 Rating <i>Severity</i> .....	16
Tabel 2.2 Rating <i>Occurance</i> .....	18
Tabel 2.3 Rating <i>Detectability</i> .....	19
Tabel 4.1 Data <i>Running Time</i> .....	42
Tabel 4.2 Data <i>Downtime</i> .....	43
Tabel 4.3 Data Laporan Bulanan Maintenance.....	44
Tabel 4.4 Data <i>Straightpass blanking disc</i> .....	45
Tabel 4.5 Perhitungan Loading Time .....	46
Tabel 4.6 Perhitungan <i>Operation Time</i> .....	47
Tabel 4.7 Perhitungan <i>Availability</i> .....	48
Tabel 4.8 Perhitungan <i>Performance rate</i> .....	49
Tabel 4.9 Perhitungan <i>Quality Rate</i> .....	50
Tabel 4.10 Perhitungan <i>Overall Equipment Effectiveness</i> .....	51
Table 4.11 Rata-rata OEE Aktual .....	52
Tabel 4.12 Perhitungan <i>Equipment Failure Losses</i> .....	53
Tabel 4.13 Data Set up.....	54
Tabel 4.14 Perhitungan <i>Set Up and Adjustment Losses</i> .....	55
Tabel 4.15 Perhitungan <i>non productive time</i> .....	56
Tabel 4.16 Perhitungan <i>Idling time and minor stoppages</i> .....	57
Tabel 4.17 Perhitungan <i>Reduced speed losses</i> .....	58
Tabel 4.18 Perhitungan <i>Defect losses</i> .....	59
Tabel 4.19 Persentase masing-masing <i>Losses</i> .....	59
Tabel 4.20 Kumulatif <i>Losses</i> .....	60
Tabel 4.21 Diagram Matrik Kuisioner CTQ.....	65
Table 4.22 Proses FMEA	66

## DAFTAR GAMBAR

Gambar 2.1 Diagram Pareto .....	11
Gambar 2.2 Gambaran umum <i>Fishbone</i> Diagram.....	12
Gambar 2.3 Contoh Diagram Matriks (CTQ).....	14
Gambar 4.1 Struktur Organisasi Lantai Produksi .....	31
Gambar 4.2 Hasil Produksi .....	32
Gambar 4.3 Blank Part (Coil Blanking Process) .....	33
Gambar 4.4 Gulungan koil di lantai produksi PT. XYZ.....	34
Gambar 4.5 Coil Car .....	34
Gambar 4.6 Roll Leveller Straightener Machine.....	35
Gambar 4.7 Loop Table .....	36
Gambar 4.8 NamePlate Measuring Roll .....	37
Gambar 4.9 Observasi Mesin AIDA.....	37
Gambar 4.10 Inspeksi dan Grafik burry defect bulan Agustus 2019.....	38
Gambar 4.11 Washing Machine .....	38
Gambar 4.12 Inspeksi dent defect.....	39
Gambar 4.13 Auto Magnetic Piller Machine .....	39
Gambar 4.14 Produk Blank (Hasil Output) .....	40
Gambar 4.13 Peta Proses Operasi Produk Blank.....	41
Gambar 4.14 diagram pareto <i>Six Big Losses</i> .....	60
Gambar 4.15 diagram <i>Fishbone</i> OEE.....	61